UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/873,163	06/02/2001	Steven Olson	C01-010	3061

23459   7590   06/16/2008
COGNEX CORPORATION
INTELLECTUAL PROPERTY DEPARTMENT
1 VISION DRIVE
NATICK, MA 01760-2077

EXAMINER
ROSWELL, MICHAEL

ART UNIT	PAPER NUMBER
2173	

MAIL DATE	DELIVERY MODE
06/16/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

PTOL-90A (Rev. 04/07)

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on _26 March 2008_.
2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.
3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _1-17,20,22-30 and 32-34_ is/are pending in the application.
     4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5)☐ Claim(s) _____ is/are allowed.
6)☒ Claim(s) _1-17,20,22-30 and 32-34_ is/are rejected.
7)☐ Claim(s) _____ is/are objected to.
8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.
10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
     a)☐ All   b)☐ Some * c)☐ None of:
       1.☐ Certified copies of the priority documents have been received.
       2.☐ Certified copies of the priority documents have been received in Application No. _____.
       3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
     * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
     Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413)
     Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

This Office action is in response to the Request for Continued Examination filed 26 March 2008.

Claim Objections

Claim 29 is objected to because of the following informalities: the claim fails to terminate in the proper punctuation. Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1, 20, 26 and 30 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claims contain subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The claims contain amended limitations such as "distinct vision processors", "distinct machine vision user interface", and "distinct machine vision UI computing platform". The examiner contends that the specification does not disclose what Applicant believes to be sufficiently "distinct". As a result, the examiner has interpreted the claim limitations in the broadest reasonable light.

Claim Rejections - 35 USC § 103

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 1-17, 20, 23-30, and 33-34 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Meyer et al (US Patent 5,742,504), hereinafter Meyer, Van Dort et al (US

Patent 5,537,104), hereinafter Van Dort, and Silver et al (US Patent 6,931,602), hereinafter

Silver. Further evidenced by Matrix Vision (http://www.matrix-

vision.com/news/print.php?ProductID=10&lang=en).

Regarding claim 1, Meyer teaches a machine vision system having a plurality of vision

processors (VPs), each being on a respective VP computing platform (taught as the connection

of a plurality of digital cameras to a machine vision system, at col. 4, lines 26-28; Meyer also

allows for the use of various vision processors and frame grabbers at col. 2, lines 60-61), at

least one machine vision user interface (UI) being on a machine vision UI computing platform

(taught as the use of a Visual Basic toolbox presented to the user on a machine separate from

the VPs for allowing the user control and selective communication with the multiple VPs in the

machine vision system and for the viewing of live and still images from those VPs, at col. 4,

lines 54-63, and col. 5, lines 4-5 and 15-20). Meyer also teaches a link function enabling a user

to configure any second VP using the machine vision UI (taught as the camera control of col. 5,

lines 57-67), and for establishing communication between a second VP in the machine vision

system and the machine vision UI (taught as the linking of a camera to a Camera control, at col.

6, lines 10-16). Meyer further teaches enabling communication via the network established by

the link function enabling a continually updated image display on the at least one machine vision

UI representing a current state of a second VP in the machine vision system (taught as the

display of live images, at col. 6, lines 10-18). Matrix Vision teaches the use of digital cameras

similar to those used by Meyer, with the digital cameras incorporating processor power for the

purpose of integrated processing.

Meyer fails to explicitly teach providing a first VP with a link function, the link function being a control function executable by the first VP, and executing the link function so as to issue instructions from the first VP to the UI to establish communication with a second VP.

Van Dort teaches a system for equipment control wherein various units are linked over a common communication channel, which the user may interact with by way of a graphic interface connected to the system. Van Dort allows for the control of audio and video equipment at col. 1, lines 21-25. Furthermore, Van Dort teaches executing a link function so as to issue instructions from a first equipment unit to a UI to establish communication with a second equipment unit (taught as the use of an actuator connected to equipment in the system, wherein a change of state in the actuator sends a signal out to other equipment units, which may change their state in a way contained by the signal, at col. 5, lines 55-64). Furthermore, the graphic interface of Van Dort may be used to generate "mark" and "link" signals between devices, as shown at col. 10, lines 24-28.

Therefore, it would have been obvious to one of ordinary skill in the art, having the teachings of Meyer and Van Dort before him at the time the invention was made to modify the machine vision system of Meyer to include the equipment message transmission of Van Dort in order to obtain a machine vision system wherein VPs may send link functions capable of changing the state of other VPs.

One would be motivated to make such a combination for the advantage of flexible configuration for interactions between different pieces of equipment in a system. See Van Dort, col. 1, lines 15-18.

However, Meyer and Van Dort fail to explicitly teach the communication of the plurality of VPs and the UI over a network, necessitating that the VPs and the UI are distinct and disposed on distinct computing platforms. Silver teaches a method for the control of machine vision tools

similar to that of Meyer and Van Dort. Furthermore, Silver teaches the communication of a

plurality of VPs and a UI over a network, at col. 2, line 50 through col. 3, line 15. As Silver

allows the communication of the VPs and the UI over a network, the fact that the VPs and the UI

may be remotely located from one another allows for the VPs, UI and computing platforms to be

distinct from one another, as the examiner has interpreted "distinct" in this case to be analogous

to "separate".

Therefore, it would have been obvious to one of ordinary skill in the art, having the

teachings of Meyer, Van Dort, and Silver before him to modify the machine vision system of

Meyer and Van Dort to include the networked communication of Silver. One would have been

motivated to make such a combination for the advantage of increased accessibility to multiple

vision processor systems. See Silver, col. 1, lines 40-46.

Regarding claim 2, Van Dort teaches a control function having a plurality of parameters,

including an identifier of a second VP, taught as the use of an event table enabling response to

a multitude of events, and destination addresses in the table to facilitate communication

between devices, at col. 6, lines 43-53.

Regarding claim 3, Meyer teaches clicking on a graphical representation of the link

function displayed by the machine vision UI, taught as the manipulation of control icons, taught

at col. 6, lines 13-17.

Regarding claims 4, 25, and 28, at the time the invention was made, it would have been

obvious to a person of ordinary skill in the art to modify the graphical representation of Meyer to

include selectable underlined text strings. Applicant has not disclosed that underlined text

strings provides an advantage, is used for a particular purpose, or solves a stated problem. One of ordinary skill in the art, furthermore, would have expected Applicant's invention to perform equally well with the iconic representations of Meyer because both graphical representations involve "point and click" functionality, and produce the same end result.

Therefore, it would have been obvious to one of ordinary skill in the art to modify Meyer and Van Dort to obtain the invention as specified in claims 4, 25, and 28.

Regarding claim 5, Van Dort teaches a control function having a plurality of parameters, including an identifier of a second VP, taught as the use of an event table enabling response to a multitude of events, and destination addresses in the table to facilitate communication between devices, at col. 6, lines 43-53.

Regarding claims 6 and 7, Meyer teaches clicking on a graphical representation of the link function displayed by the machine vision UI to initiate execution of the link function, taught as the manipulation of control icons, taught at col. 6, lines 13-17.

Regarding claims 8 and 9, check boxes and radio buttons in user interfaces are extremely well known in the art, being present in simple java applets up to more complex applications. Therefore, it would have been obvious to one of ordinary skill in the art to include check boxes and radio buttons in a machine vision user interface.

Regarding claims 10-12, Van Dort teaches executing a link function in response to an external event, taught as the execution of a link function in response to events such as a person

turning a knob, or temperature reaching a certain value, which may certainly be related in an

industrial process, at col. 6, lines 41-43.

Regarding claim 13, the link function of Van Dort is inherently initiated by a

programmatic decision, as parameters in the event table of col. 6, lines 37-53 must be at certain

values before the link function is executed.

Regarding claim 14, Meyer teaches clicking on a graphical representation of the link

function displayed by the machine vision UI to initiate execution of the link function, taught as

the manipulation of control icons, taught at col. 6, lines 13-17.

Regarding claim 15, the link function of Van Dort is inherently included in a function

execution sequence of a VP each time it is executed.

Regarding claim 16, the camera control function of Meyer allows for the control of one

camera, and therefore must close communication with a previously controlled camera. See

Meyer, col. 5, lines 57-67 and col. 6, lines 1-20.

Regarding claim 17, Meyer teaches the display of live images on a machine vision UI

provided by a camera, which may be a first or second VP, taught as the display of live images,

at col. 6, lines 10-18.

Regarding claim 20, Meyer teaches a machine vision system having a plurality of vision

processors (VPs), each being on a respective VP computing platform (taught as the connection

of a plurality of digital cameras to a machine vision system, at col. 4, lines 26-28; Meyer also

allows for the use of various vision processors and frame grabbers at col. 2, lines 60-61), at

least one machine vision user interface (UI) being on a machine vision UI computing platform

(taught as the use of a Visual Basic toolbox presented to the user on a machine separate from

the VPs for allowing the user control and selective communication with the multiple VPs in the

machine vision system and for the viewing of live and still images from those VPs, at col. 4,

lines 54-63, and col. 5, lines 4-5 and 15-20). Matrix Vision teaches the use of digital cameras

similar to those used by Meyer, with the digital cameras incorporating processor power for the

purpose of integrated processing.

Meyer fails to explicitly teach executing the link function so as to issue instructions from

the first VP to the machine vision UI to establish communication with a second VP.

Van Dort teaches a system for equipment control wherein various units are linked over a

common communication channel, which the user may interact with by way of a graphic interface

connected to the system. Van Dort allows for the control of audio and video equipment at col. 1,

lines 21-25. Furthermore, Van Dort teaches executing a link function so as to issue instructions

from a first equipment unit to a UI to establish communication with a second equipment unit

(taught as the use of an actuator connected to equipment in the system, wherein a change of

state in the actuator sends a signal out to other equipment units, which may change their state

in a way contained by the signal, at col. 5, lines 55-64). Furthermore, the graphic interface of

Van Dort may be used to generate "mark" and "link" signals between devices, as shown at col.

10, lines 24-28.

Therefore, it would have been obvious to one of ordinary skill in the art, having the

teachings of Meyer and Van Dort before him at the time the invention was made to modify the

machine vision system of Meyer to include the equipment message transmission of Van Dort in

order to obtain a machine vision system wherein VPs may send link functions capable of changing the state of other VPs.

One would be motivated to make such a combination for the advantage of flexible configuration for interactions between different pieces of equipment in a system. See Van Dort, col. 1, lines 15-18.

However, Meyer and Van Dort fail to explicitly teach the communication of the plurality of VPs and the UI over a network, necessitating that the VPs and the UI are distinct and disposed on distinct computing platforms. Silver teaches a method for the control of machine vision tools similar to that of Meyer and Van Dort. Furthermore, Silver teaches the communication of a plurality of VPs and a UI over a network, at col. 2, line 50 through col. 3, line 15. As Silver allows the communication of the VPs and the UI over a network, the fact that the VPs and the UI may be remotely located from one another allows for the VPs, UI and computing platforms to be distinct from one another, as the examiner has interpreted "distinct" in this case to be analogous to "separate".

Therefore, it would have been obvious to one of ordinary skill in the art, having the teachings of Meyer, Van Dort, and Silver before him to modify the machine vision system of Meyer and Van Dort to include the networked communication of Silver. One would have been motivated to make such a combination for the advantage of increased accessibility to multiple vision processor systems. See Silver, col. 1, lines 40-46.

Regarding claims 23-24, Meyer teaches clicking on a graphical representation of the link function displayed by the machine vision UI to initiate execution of the link function, taught as the manipulation of control icons, taught at col. 6, lines 13-17.

Regarding claim 26, Meyer and Van Dort have been shown *supra* to teach a graphical representation being adapted to respond to user action so as to cause a first VP to instruct a UI to establish communication with a second VP in the machine vision system, the communication enabling a continually updated image display on the UI representing a current state of the second VP, and enabling a user to configure the second VP using the at least one UI. See Meyer, col. 4, lines 54-63, and col. 5, lines 4-5 and 15-20 and Van Dort, col. 5, lines 55-64.

At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to incorporate the graphical representation into a spreadsheet. Applicant has not disclosed that the incorporation of the graphical representation into a spreadsheet provides an advantage, is used for a particular purpose, or solves a stated problem. One of ordinary skill in the art, furthermore, would have expected Applicant's invention to perform equally well with the toolbar of Meyer because a toolbar and a spreadsheet with a graphical representation included would have similar column and row structure, and similar "point and click" functionality.

Therefore, it would have been obvious to one of ordinary skill in the art to modify Meyer and Van Dort to obtain the invention as specified in claim 26.

However, Meyer and Van Dort fail to explicitly teach the communication of the plurality of VPs and the UI over a network, necessitating that the VPs and the UI are distinct and disposed on distinct computing platforms. Silver teaches a method for the control of machine vision tools similar to that of Meyer and Van Dort. Furthermore, Silver teaches the communication of a plurality of VPs and a UI over a network, at col. 2, line 50 through col. 3, line 15. As Silver allows the communication of the VPs and the UI over a network, the fact that the VPs and the UI may be remotely located from one another allows for the VPs, UI and computing platforms to be distinct from one another, as the examiner has interpreted "distinct" in this case to be analogous to "separate".

Therefore, it would have been obvious to one of ordinary skill in the art, having the teachings of Meyer, Van Dort, and Silver before him to modify the machine vision system of Meyer and Van Dort to include the networked communication of Silver. One would have been motivated to make such a combination for the advantage of increased accessibility to multiple vision processor systems. See Silver, col. 1, lines 40-46.

Regarding claim 27, the camera control function of Meyer allows for the control of one camera, and therefore must close communication with a previously controlled camera. See Meyer, col. 5, lines 57-67 and col. 6, lines 1-20.

Regarding claim 29, it can be seen in Figs. 4 and 6 of Meyer that the graphical representation for controlling a VP is an iconic representation.

Regarding claim 30, Meyer teaches a machine vision system having a plurality of vision processors (VPs), each being on a respective VP computing platform (taught as the connection of a plurality of digital cameras to a machine vision system, at col. 4, lines 26-28; Meyer also allows for the use of various vision processors and frame grabbers at col. 2, lines 60-61), at least one machine vision user interface (UI) being on a machine vision UI computing platform (taught as the use of a Visual Basic toolbox presented to the user on a machine separate from the VPs for allowing the user control and selective communication with the multiple VPs in the machine vision system and for the viewing of live and still images from those VPs, at col. 4, lines 54-63, and col. 5, lines 4-5 and 15-20). Matrix Vision teaches the use of digital cameras similar to those used by Meyer, with the digital cameras incorporating processor power for the purpose of integrated processing.

Meyer fails to explicitly teach executing the link function so as to issue instructions from the first VP to the machine vision UI to establish communication with a second VP.

Van Dort teaches a system for equipment control wherein various units are linked over a common communication channel, which the user may interact with by way of a graphic interface connected to the system. Van Dort allows for the control of audio and video equipment at col. 1, lines 21-25. Furthermore, Van Dort teaches executing a link function so as to issue instructions from a first equipment unit to a UI to establish communication with a second equipment unit (taught as the use of an actuator connected to equipment in the system, wherein a change of state in the actuator sends a signal out to other equipment units, which may change their state in a way contained by the signal, at col. 5, lines 55-64). Furthermore, the graphic interface of Van Dort may be used to generate "mark" and "link" signals between devices, as shown at col. 10, lines 24-28.

Therefore, it would have been obvious to one of ordinary skill in the art, having the teachings of Meyer and Van Dort before him at the time the invention was made to modify the machine vision system of Meyer to include the equipment message transmission of Van Dort in order to obtain a machine vision system wherein VPs may send link functions capable of changing the state of other VPs.

One would be motivated to make such a combination for the advantage of flexible configuration for interactions between different pieces of equipment in a system. See Van Dort, col. 1, lines 15-18.

However, Meyer and Van Dort fail to explicitly teach the communication of the plurality of VPs and the UI over a network, necessitating that the VPs and the UI are distinct and disposed on distinct computing platforms. Silver teaches a method for the control of machine vision tools similar to that of Meyer and Van Dort. Furthermore, Silver teaches the communication of a

plurality of VPs and a UI over a network, at col. 2, line 50 through col. 3, line 15. As Silver

allows the communication of the VPs and the UI over a network, the fact that the VPs and the UI

may be remotely located from one another allows for the VPs, UI and computing platforms to be

distinct from one another, as the examiner has interpreted "distinct" in this case to be analogous

to "separate".

Therefore, it would have been obvious to one of ordinary skill in the art, having the

teachings of Meyer, Van Dort, and Silver before him to modify the machine vision system of

Meyer and Van Dort to include the networked communication of Silver. One would have been

motivated to make such a combination for the advantage of increased accessibility to multiple

vision processor systems. See Silver, col. 1, lines 40-46.

Regarding claims 33-34, Meyer teaches user action being a mouse click upon a

graphical representation, taught as the use of a Visual Basic toolbox presented to the user on a

machine separate from the VPs for allowing the user control and selective communication with

the multiple VPs in the machine vision system and for the viewing of live and still images from

those VPs, at col. 4, lines 54-63, and col. 5, lines 4-5 and 15-20. Furthermore, the use of

underlined text strings as a user manipulable graphical entity (i.e. linking from one web page to

another) is notoriously well known in the art, and would have been obvious to substitute in place

of the graphical representation stated above.

Claims 22 and 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Meyer, Van Dort, Silver and Blowers et al (US Patent 6,298,474), hereinafter Blowers. Further

evidenced by Matrix Vision (http://www.matrix-

vision.com/news/print.php?ProductID=10&lang=en).

Meyer, Van Dort and Silver have been shown *supra* to teach a graphical representation being adapted to respond to user action so as to cause a first VP on a first VP computing platform to instruct a machine vision UI on a machine vision UI computing platform to establish communication with a second VP on a second VP computing platform, the communication enabling a continually updated image display on the machine vision UI representing the current state of the second VP, and enabling a user to configure the second VP using the machine vision UI.

Meyer, Van Dort and Silver fail to explicitly teach a network supporting TCP/IP protocol.

Blowers teaches the use of a network for vision processor/user interface communication (Column 9, Lines 26-28), where the network communicates using TCP/IP protocol (Column 6, Lines 43-45).

Therefore, it would have been obvious for one of ordinary skill in the art at the time of the invention to modify the teachings of Meyer, Van Dort and Silver with those of Blowers to obtain the machine vision system described above by Meyer, Van Dort and Silver that communicates over a network using TCP/IP network protocol.

Motivation for such a combination is given by Blowers, who states the inclusion of such configuration: "there is illustrated schematically a machine vision system generally indicated at **20** generally of the type which can be supported by the method and system of the present invention" (Column 7, Lines 40-43).

Response to Arguments

Applicant's arguments filed 26 March 2008 have been fully considered but they are not persuasive. The amended claims contain limitations such as "distinct vision processors",

"distinct machine vision user interface", and "distinct machine vision UI computing platform". As

Silver allows the communication of the VPs and the UI over a network, the fact that the VPs and

the UI may be remotely located from one another allows for the VPs, UI and computing

platforms to be distinct from one another, as the examiner has interpreted "distinct" in this case

to be analogous to "separate", as set forth in the rejection above.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner

should be directed to Michael Roswell whose telephone number is (571)272-4055. The

examiner can normally be reached on 8:30 - 6:00 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Dennis Chow can be reached on (571) 272-7767. The fax phone number for the

organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

applications is available through Private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private

PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you

would like assistance from a USPTO Customer Service Representative or access to the

automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Tadesse Hailu/
Primary Examiner, Art Unit 2173

Michael Roswell
6/10/2008